AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application, and reflects the changes made by the Amendment under 37 C.F.R. §1.116 filed May 29, 2008.

LISTING OF CLAIMS:

Claims 1-20. (canceled).

Claim 21. (previously presented): A semiconductor device comprising:

a gate insulating film and a gate electrode stacked in this order;

wherein said gate insulating film and said gate electrode are in contact with each other; and

wherein said gate insulating film comprises a nitrogen containing high-dielectric-constant insulating film which has a structure in which nitrogen is introduced into metal oxide or metal silicate; and

the nitrogen concentration in said nitrogen containing high-dielectric-constant insulating film has a distribution in the direction of the film thickness; and

a position at which the nitrogen concentration in said nitrogen containing high-dielectric-constant insulating film reaches a maximum in the direction of the film thickness is present in a region at a distance from the silicon substrate.

Claim 22. (original): A semiconductor device according to Claim 21, wherein a position at which the nitrogen concentration in said nitrogen containing high-dielectric-constant insulating film reaches a maximum in the direction of the film thickness is present in a region at a distance of not less than 0.5 nm from the silicon substrate.

Claim 23. (original): A semiconductor device according to Claim 21, wherein a position at which the nitrogen concentration in said nitrogen containing high-dielectric-constant insulating film reaches a maximum in the direction of the film thickness is localized on the side of a gate electrode in said nitrogen containing high-dielectric-constant insulating film.

Claim 24. (original): A semiconductor device according to Claim 21, wherein a position at which the nitrogen concentration in said nitrogen containing high-dielectric-constant insulating film reaches a maximum in the direction of the film thickness is localized in the central section of said nitrogen containing high-dielectric-constant insulating film.

Claim 25. (original): A semiconductor device according to Claim 21, wherein the nitrogen concentration on a silicon substrate side interface of said gate insulating film is less than 3 atomic %.

Claim 26. (original): A semiconductor device according to Claim 21, wherein said gate insulating film comprises a silicon oxide film formed on said silicon substrate so as to

be in contact therewith, and said nitrogen containing high-dielectric-constant insulating film formed on said silicon oxide film so as to be in contact therewith.

Claim 27. (original): A semiconductor device according to Claim 21, wherein said silicon substrate and said gate insulating film are in contact with each other, and said gate insulating film and a gate electrode are in contact with each other; and

said gate electrode is made of either a polysilicon or a polysilicon germanium conductive film.

Claim 28. (previously presented): A semiconductor device according to Claim 21, wherein said gate insulating film contains at least one type selected from the group consisting of Zr, Hf, Ta, Al, Ti, Nb, Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb and Lu.

Claim 29. (previously presented): A semiconductor device comprising:

a gate insulating film and a gate electrode stacked in this order;

wherein said gate insulating film and said gate electrode are in contact with each other; and

wherein said gate insulating film comprises a nitrogen containing high-dielectric-constant insulating film which has a structure in which nitrogen is introduced into metal silicate; and

a nitrogen atom in said nitrogen containing high-dielectric-constant insulating film selectively bonds with a silicon atom in metal silicate.

Claim 30. (original): A semiconductor device according to Claim 29, wherein a nitrogen atom which selectively bonds with a silicon atom in said metal silicate is situated at a distance from the silicon substrate.

Claim 31. (original): A semiconductor device according to Claim 30, wherein said gate insulating film comprises a silicon oxide film formed on said silicon substrate so as to be in contact therewith, and said nitrogen containing high-dielectric-constant insulating film formed on said silicon oxide film so as to be in contact therewith.

Claim 32. (original): A semiconductor device according to Claim 30, wherein said silicon substrate and said gate insulating film are in contact with each other, and said gate insulating film and a gate electrode are in contact with each other; and

said gate electrode is made of either a polysilicon or a polysilicon germanium conductive film.

Claim 33. (previously presented): A semiconductor device according to one of Claims 21-31, wherein said gate insulating film contains at least one type selected from the group consisting of Zr, Hf, Ta, Al, Ti, Nb, Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb and Lu.

Claim 34. (previously presented): A semiconductor device comprising:

a gate insulating film and a gate electrode stacked in this order on a silicon substrate;

wherein said gate insulating film and said gate electrode are in contact with each other; and

wherein said gate insulating film comprises a nitrogen containing high-dielectric-constant insulating film which has a structure in which nitrogen is introduced into metal silicate; and

the composition of said nitrogen containing high-dielectric-constant insulating film continuously varies in the direction of the film thickness and the silicon concentration has a minimum value in the middle section lying between a silicon substrate side interface of said nitrogen containing high-dielectric-constant insulating film and a gate electrode side interface thereof; and

nitrogen is introduced only into a region lying between the position at which the silicon concentration has the minimum value and said gate electrode side interface.

Claim 35. (original): A semiconductor device according to Claim 34, wherein said silicon substrate and said gate insulating film are in contact with each other, and said gate insulating film and a gate electrode are in contact with each other; and

said gate electrode is made of either a polysilicon or a polysilicon germanium conductive film.

Claim 36. (previously presented): A semiconductor device according to Claim 34, wherein said gate insulating film contains at least one type selected from the group consisting of Zr, Hf, Ta, Al, Ti, Nb, Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb and Lu.

Claim 37. (previously presented): A semiconductor device comprising:

a gate insulating film and a gate electrode stacked in this order;

wherein said gate insulating film and said gate electrode are in contact with each other; and

wherein said gate insulating film has a layered structure having, from the silicon substrate side, a first silicon oxide film, a metal oxide film or a metal silicate film and a second silicon oxide film; and

only the second silicon oxide film has a structure in which nitrogen is introduced into silicon oxide.

Claim 38. (original): A semiconductor device according to Claim 37, wherein said silicon substrate and said gate insulating film are in contact with each other, and said gate insulating film and a gate electrode are in contact with each other; and

said gate electrode is made of either a polysilicon or a polysilicon germanium conductive film.

Claim 39. (previously presented): A semiconductor device according to Claim 37, wherein said gate insulating film contains at least one type selected from the group consisting of Zr, Hf, Ta, Al, Ti, Nb, Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb and Lu.

Claim 40. (previously presented): A semiconductor device comprising:

a gate insulating film and a gate electrode stacked in this order;

wherein said gate insulating film and said gate electrode are in contact with each other; and

wherein said gate insulating film contains nitrogen and metal oxide or metal silicate; and

the nitrogen concentration in said gate insulating film has a distribution in the direction of the film thickness; and

a position at which the nitrogen concentration in said gate insulating film reaches a maximum in the direction of the film thickness is present in a region at a distance from the silicon substrate.